

Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

Listing of Claims:

1. (Canceled)
2. (Currently Amended) A low equivalent series resistance (ESR) switch for selectively adding to a coil-capacitor circuit of a nuclear or electron resonance system, the switch comprising a pair of physically and electrically contacting members comprising a pair of contact surfaces and having mutually large contact surface areas, said members being movable between a quiescent position where the contact surface areas are separated by a small distance and an active position where the contact surface areas are brought into physical and electrical contact with each other to connect into the coil-capacitor circuit.
3. (Currently Amended) A low ESR switch as claimed in claim ~~1~~2, ~~including comprising~~ actuating means to move said contacting members between said quiescent position and said active position.
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Currently Amended) A low ESR switch as claimed in claim ~~1~~2, wherein said contacting members are coated with a metal to prevent corrosion and carbonisation of the surface thereof.
8. (Currently Amended) A low ESR switch as claimed claim ~~1~~2, wherein said contacting members are made or coated with copper.
9. (Currently Amended) A low ESR switch as claimed in claim ~~1~~2, wherein said contacting members are made or coated with gold.

10. (Currently Amended) A low ESR switch as claimed in claim 12, wherein said contacting members are made or coated with rhodium.

11. (Currently Amended) A low ESR switch as claimed in claim 12, wherein said contacting members are made or coated with silver.

12. (Currently Amended) A low ESR switch as claimed in claim 12, wherein said contacting members are made or coated with mercury and are contained within a vessel which prevents the escape of the mercury.

13. (Currently Amended) A low ESR switch as claimed in claim 12, wherein the entire switch is contained within a vacuum vessel.

14. (Currently Amended) A method for selectively adding a low equivalent series resistance into a coil-capacitor circuit of a nuclear or electron resonance system, the method comprising:

moving two large contact surface areas comprising a pair of contact surfaces between a quiescent position where the contact surface areas are separated by a small distance and an active position where the contact surface areas are brought into physical and electrical contact with each other; and

wherein a low equivalent series resistance is disconnected from the coil-capacitor circuit when the contact surface areas are in the quiescent position and is connected into the coil-capacitor circuit when the contact surface areas are in the active position.

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (New) A method as claimed in claim 14, further comprising guiding the contact surface areas between the quiescent position and the active position using a plurality of insulated guide rods.

19. (New) A low ESR switch as claimed in claim 2, wherein the switch further comprises a plurality of insulated guide rods to guide the contacting members in and between said quiescent position and said active position.
20. (New) A low equivalent series resistance (ESR) switch for selectively adding to a coil-capacitor circuit of a nuclear or electron resonance system, the switch comprising a pair of physically and electrically contacting members comprising a pair of parallel bars and having mutually large contact surface areas, said members being movable between a quiescent position where the contact surface areas are separated by a small distance and an active position where the contact surface areas are brought into physical and electrical contact to connect into the coil-capacitor circuit.
21. (New) A switch as claimed in claim 20, further comprising a plurality of insulated guide rods to guide the parallel bars in and between said quiescent position and said active position.
22. (New) A low equivalent series resistance (ESR) switch for selectively adding to a coil-capacitor circuit of a nuclear or electron resonance system, the switch comprising a pair of physically and electrically contacting members comprising a rotatable oval cross-section shaped rod disposed between two concave bars defining mutually large contact surface areas, said oval cross-section shaped rod being rotatable to an active position to physically and electrically connect with said concave bars and further rotatable to a quiescent position to physically and electrically disconnect from said concave bars.
23. (New) A low equivalent series resistance (ESR) switch for selectively adding to a coil-capacitor circuit of a nuclear or electron resonance system, the switch comprising a pair of physically and electrically contacting members comprising an elongated multi-pole switch having a pair of radially disposed and transversely spaced lugs and a pair of radial, externally mounted concave contacts, the lugs being rotatable relative to the contacts, whereby rotation of the switch to different angular positions allows different pairs of lugs to make physical and electrical contact with said contacts in discrete active positions, and also to disconnect the physical and electrical contact between said lugs and said contacts in discrete quiescent positions.

Serial No.: 10/519,143

Art Unit: 2859

Inventor: John Harold FLEXMAN et al.

Attorney's Docket No.: WRA0010-US

Page 13

24. (New) In a coil capacitor circuit of a nuclear or electron resonance system, a low equivalent series resistant (ESR) switch selectively added thereto, the switch as claimed in claim 2.